GRUMMAN plane news

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Bid on trainer for Orbiter with modified G-II fanjet

NASA is looking far ahead.

Last summer the National Aeronautics and Space Administration awarded to Grumman a $150,000 funded study contract for a Shuttle Training Aircraft (STA) which would be a modification of a Gulfstream II fanjet. Other aircraft companies competing for the contract included Boeing, Lockheed, and General Dynamics. Lockheed, with its Jet Star, and Grumman with its Gulfstream II were the winners of the study, which is due to be submitted to NASA-Houston next month. NASA is expected to make a decision between Grumman and Lockheed in the first half of calendar year 1973, the winner to proceed with the building of two trainers that would precede the Shuttle Orbiter's first flight by about a year.

Orbiter 'stand-in'

Since the Gulfstream II fanjet, which weighs 62,000 pounds, is going to be standing in for the Orbiter, which will weigh 250,000 pounds, the performance of the bigger aircraft must be simulated in a number of respects. The controls on the Gulfstream must be modified to force it to fly like, and to have the feel of, the much bigger, heavier delta-wing Orbiter.

"Just for one example," said Bill Gentzlinger, STA Program manager, "the pilot of the STA will have to use in-flight reverse thrust to change the plane's drag — we'll need 16,000 pounds of drag to make the Gulfstram feel like the giant Orbiter."

Modifications will include direct lift flaps to permit control of the G-II vertically, to simulate the Orbiter's expected performance. Side force controls positioned under the wings will permit G-II response like that of the Orbiter, sidewards.

All the additions, said Gentzlinger, are aerodynamically feasible, and "all are in the interest of controlling its six degrees of freedom: pitch, yaw, roll, and sideways, vertically, and along the flight path."

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Gavin named to AAS honor

President Joe Gavin has received the top award of the American Astronautical Society, the Space Flight Award.

Dr. Paul B. Richards, president of the AAS, made the presentation November 2 in Washington, D. C. Dr. Richards said:

"The award is given annually to that person whose outstanding efforts and achievements contributed most significantly to the advancement of space flight and space science. . . . "

He went on to say that " . . . Gavin's 30-year career in aerospace has been one of distinction and honor . . . (and) probably his most outstanding achievement has been his management of the Lunar Module spacecraft for the Apollo Program at Grumman. He was responsible for all activity involved with the design, manufacturing, testing, and launch of all Lunar Module spacecraft . . . NASA recognized his outstanding leadership . . . when they presented Mr. Gavin with the NASA Distinguished Public Service Award."

While Gavin said that he was "deeply gratified" that the AAS had chosen him, he added, characteristically: "It must be remembered, however, that the award was possible only because of the thousands of people on Grumman's team who unselfishly gave of themselves to insure each mission's success."

Hawkeye flight. **The Grumman Hawkeye had a distinguished visitor at the controls a couple of weeks ago when Vice Adm. Frederick H. (Mike) Michaelis, Commander, Naval Air Force, Atlantic, piloted the carrier airborne-early warning plane for the first time. Admiral Michaelis is shown with Jim Philbin, assistant to E-2C Program Director Tom Guarino, following the flight. (Photo by Fred Annette)**

Practice countdown on Apollo 17 . . . soon, the real thing begins

At the moment, Apollo 17 is in the midst of preparation for countdown demonstration at Kennedy Space Center, a period begun November 7 and set to end two days from now, on November 15.

Then, from the 16th through the 22nd, countdown demonstration will be conducted. And on December 1, the real countdown begins for launch the night of December 6.

So time is short. Soon the last Apollo mission will be on its way. The curtain will drop, abruptly, on what history may well point to as the greatest imaginative scientific-engineering-management feat in history.

In a sense, though, there is no time to view it in the whole yet, for the job is still under way — and the goal for the Grummanites on the program now is to make certain that this will be the best Lunar Module of all. From what Spacecraft Director Jerry Goldmacher says, it seems that it will be:

'Smooth as glass'

"At the last FRR (Flight Readiness Review) LM-12 glided through. There was a minimum of problems, and no major probems at all. You can say the same thing about what's going on now. It's as smooth as glass."

Goldmacher indicates that matters are proceeding as planned and that Grumamn people at the Cape are as "charged up" as they ever were; that there's been no tailoff of determination to make LM "a beauty." In fact, Goldmacher says, "everybody's aware that as the last of the line, it has to be the best."

And because of that, Goldmacher points out, there's little news. "The people know their jobs and they're getting them done, quietly and efficiently. Almost humdrum. When you know what you're doing you don't have to be spectacular, and people on LM do know what they're doing."

Remember 'lifeboat'

Perhaps — it's certainly possible — the Apollo missions have gone so well that the general public has taken success for granted. Because of the LM, cast in tne role of "lifeboat" in the Apollo 13 mission, potential disaster was averted and a happy splashdown

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Award Carr Robinson Trophy

They had a get-together to honor Charlie Carr at the Marine Air Station at Cherry Point, N. C., recently, and one of those who made the scene was Brig. Gen. A. W. O'Donnell, Assistant Commanding General of the 2nd Marine Air Wing. General O'Donnell is shown above (R) with Grumman Field Supervisor Don Brent presenting Charlie Carr, a Marine captain, with a model of a Grumman A-6 Intruder following his selection as Marine Naval Flight Officer of the Year. As the Marine NFO of the Year, Carr also earned the Robert G. Robinson Trophy, sponsored by Grumman.

To describe Carr as a veteran flier is a bit of an understatement. Charlie began his 18-year career in the Marine Corps as an enlisted navigator and was commissioned in 1962. He has flown 663 combat missions, including 207 over North Vietnam, and qualified as a "Centurion" with more than 100 arrested landings aboard the carrier Coral Sea. Carr has logged more than 8,000 flying hours—with over 2,000 in the Grumman A-6 alone, and is a member of the Red River Fighter Pilots Association and a "Tailhooker", too.

Captain Carr, Operations Officer and Intruder bombardier/navigator from VMA (AW) 224 at Cherry Point, was the second man selected to receive the Robinson Award. A pioneer of what is now the Marine Naval Flight Officer specialty, Robert G. Robinson won the Medal of Honor while serving as an aerial flight gunner with the First Marine Aviation Force in France during World War I.

Thanks from the U.S. Treasury

Sometimes a simple ceremony makes a sharper mark than one loaded with pomp. Such was the case recently when Manne Deutsch, Downstate Area Manager of the U. S. Savings Bond Division, came to congratulate Grumman people for a job well done.

Deutsch presented to Vice President Jack Rettaliata, for Chairman of the Board of Grumman Corporation Clint Towl, a sterling silver plate "for patriotic service, U.S. Savings Bonds Program, October 1972."

This year, Grumman achieved 94 percent participation in its annual Bonds drive.

The striking gift to Towl for the Corporation's record was the highlight of the small affair, but it was not the only award made by Deutsch. Rettaliata received a plaque bearing both the Great Seal of the United States and the seal of the U.S. Treasury. Awards for outstanding performance also went to Gus D'Errico, Employee Services, Lloyd Lee, Public Affairs, and Brian Masterson, manager, Internal Communications, Public Affairs.

Your serve . . . er, deal

If there is any question as to what tennis players might do when winter rolls around, recent results of the L.I. Industrial Bridge League could provide a clue. Val Kirillin, who captained the varsity Blue team to the Industrial tennis championship this past season, his son Al, also a member of the Blue squad, and Gerry Fogel, a varsity Red team member, spend some of their leisure time playing bridge.

And they do pretty well at it, too. Gerry (L), Val (2nd L), and Al (C), teamed with Herb Kriendler and Roman Polanski (R) to finish the season on top of the Industrial circuit (14 other teams participated in the loop), then went into a knock-out challenge round for the team crown—and won that one, too.

In the final round, the champs knocked off another fine entry from Grumman: Hugh Montague and Mel Levine (earlier winners in the L.I.-I.B.L. pairs championship) and Sid Stone, Pete Shyprekevich, and Norf Florio. (Photo by Marie Trimborn)

First Prowler landing on Lex

Although there are some Prowlers already on the prowl in Southeast Asia, other Navy air crews for the four-place Grumman EA-6B are stateside preparing for deployment with the Fleet. Recently, the first EA-6B electronic-countermeasures aircraft landed aboard the Navy's only training carrier, the USS Lexington, during operations off Pensacola, Fla.

The aircraft and crews were from VAQ-133 and VAQ-129, which are based at the Naval Air Station, Whidbey Is., Wash. Both squadrons were in the Pensacola area to complete their carrier qualifications in preparation for deployment. Skippers of 129 and 133 are Cdr. R. A. Daleke and Cdr. Frank Burrows, respectively.

They're in the news

Richie Cope, Grumman's famed heart transplant, reported that he celebrated his second anniversary "with my new pump" in mid-September, returning to Stanford Medical University Hospital "for my 2,000-mile check-up. All systems A.O.K. One week of exhaustive tests. Removed samples of the donor heart tested out as normal tissue."

At a recent dinner Cope was named chairman of the Suffolk County and the New York State Heart Association and a member of the Board of Directors and three other committees. He is still visiting patients scheduled for coronary surgery and is lecturing at hospitals and colleges and service organizations.

Ed Keonjian of Reliability Engineering was chairman of NATO's Advisory Group for Aerospace Research and Development (AGARD) Conference held last month at the Avionics Laboratory of Wright Patterson AFB. Howard Wright was one of 23 prominent speakers from the United States, Canada, and European aerospace industries and government representatives.

Wright talked on "The Influence of Cost and Technical Risk on the Design of the Avionics System for the Space Shuttle." Subject of the conference was "Automation in Manned Aerospace Systems."

Gulfstream II in competition for Shuttle Trainer Aircraft

(Continued from page 1)

With its good fuel capacity, the Gulfstream, according to Bill, is well suited to the mission cycles prescribed by NASA for the Orbiter: nine Orbiter training mission cycles per flight, three cycles per hour. "The Trainer must get up there fast, and Gulfstream II has excellent climbing performance, making it perfectly capable of three training cycles per hour," he said.

Inside, there will be a digital fly-by-wire flight control system in the simulated cockpit. At the left is the pilot's station. On the right side is the standard Gulfstream II cockpit for the instructor pilot.

Orbiter flight crews

The trainees will be the actual crews who are programmed to fly the Orbiter. Their training flights will include subsonic flight, 35,000 feet altitude to landing.

"We have Sperry Flight Systems Division-Phoenix as a member of our Grumman team," said Fred Rowley, as he unreeled the story of the Shuttle Trainer. Sperry will provide the electronics simulation package, he added, and Cornell Aeronautical Laboratory of Buffalo is acting as a consultant. "Our job here in Plant 30," he explained, "is to introduce modifications to the Gulfstream to permit the Orbiter flight crews to go through preliminary training sufficiently in advance of the first horizontal flight of the Shuttle Orbiter to assure the crews' ability to handle it. NASA Space Shuttle will also have ground-based simulators, on the same principle as the Lunar Module simulators."

The present plan for the first Trainer aircraft is to bring a "greenie" Gulfstream from Savannah to the Product Development Center in Plant 4, which is planned and laid out for just that sort of quick-response project.

New role. Grumman is working on a study contract for converting a Gulfstream II to a Shuttle Trainer Aircraft. Here Jack Klafin of Aero Engineering, Mark Siegel, STA Project aerodynamicist, and Bill Gentzlinger (R), Program manager, confer with Jim Bigham (2nd R), NASA STA Program manager. Fins on bottom of wing are new addition. (Photo by Fred Annette)

Last Apollo shot coming up soon

(Continued from page 1)

resulted, relieving most people from thoughts of what might have been. However that may be, any manned lunar journey offers the chance of hazards to the three men flying the mission. For all of the people working on the mission, that thought, above all others, may be the prime motivation.

In any event, the Grumman crew at Cape Kennedy is bearing down hard on the job of making the LM and its occupants — Gene Cernan, Spacecraft commander, and Harrison (Jack) Schmitt, LM pilot—safer than ever before.

Postpone sale

A previously announced sale of surplus desks and drafting boards at Calverton for Grumman employees has been postponed, according to Art Frank of Property Management. Present plans are to have the sale early next year, and dates and details will be announced well ahead of time in Plane News.

Tomcat racking up impressive test results

In looking at the list of Tomcat accomplishments, the striking thing is how much has been done. With 16 Tomcats in flight status, more than 1,700 flight hours have been chalked up in 879 flights—and there have been more than 800 flight-test hours on the weapon system.

And there have been other notable accomplishments:

- Nine flights in one day
- Over 30 hours of supersonic flight
- Maximum altitude of 56,400 feet achieved
- Successful launches of four Phoenix missiles against a variety of targets
- Initial carrier suitability trials on board the USS Forrestal, which included catapults and arrested landings.
- Successful firing of the M-61A gun

Also very meaningful was that, after NPE II (Navy Preliminary Evaluation II) at Pt. Mugu, the AWG-9 weapon system was said to be better than anything the Navy had ever seen. And Navy pilots have accumulated more than 330 flight hours on the Tomcat.

Qualification of 360 equipment items is 78 percent complete now, **one-to-two years ahead of normal aircraft development.** The whole qualification process is expected to be finished by the end of this year. The 500 drop tests (using static aircraft No. 2) have been completed on time. The first set (13) of Naval Air Maintenance Trainers has been delivered to the Navy, and more than 350 Navy technicians have been trained for F-14A maintenance.

It all comes down to an imposing account of progress on the Tomcat flight-test program, especially when one considers that Fleet introduction wtih Tomcat No. 18 occurred at Miramar when the first two Tomcat squadrons (VF-1 and VF-2) were activated; six production F-14s have been delivered; and Tomcats will be operational with the Fleet next July.

Electronic chamber music. Tomcat No. 13 has been spending some time hanging in Grumman's unique anechoic chamber near Plant 7, Calverton, where it is now undergoing electro-magnetic survey. The chamber itself—with protective cones on all four walls, the ceiling, and the floor — is designed to absorb electronic impulses. (Photo by Ken Bolton)

Family picnics in the South

Maybe it wasn't their purpose but those southerners tweeked the noses, so to speak, of the northern gang at Bethpage, Calverton, and other spots above the Mason Dixon Line recently. While the so-called Yankees witnessed the falling leaves that signal autumn's drift toward winter, got snow tires, and reached into their closets for the heavy clothing, the Rebels winked in self-satisfaction and—scurried out on the grass and had themselves some picnics.

'Twas the seventh annual wingding for the Grumman crowd at Houston (R), where, after liftoff of Apollo 17, Vice President Jack Buxton's forces will be keeping a close eye on LM 12, the last of the famous missions to the moon. On hand for the festivities were some 330 Grummanites and their families . . . chomping Nathan's franks as well as barbecue dinners . . . tipping a few beers . . . sipping soft drinks and eating Sno Cones. There were games, rides, and contests a-plenty. And President Joe Gavin dropped by, not just to enjoy the fun and games and food, but also to present Harry Richdale with his 30-year pin.

Some 1,100 people took advantage of the "balmy breezes" at Stuart's picnic, hosted by Art Melrose, plant manager. Word is that Frank Vozzolo is a super-chef, a guy who really cooks up a storm. And word was, too, that more than the kids had a ball.

And at Savannah, where Al Lemlein is General Manager, an invitation was extended to Mayor John Rousakes (bottom R, center). Jiggs Dreyfus holds something that looks like a malt beverage as Joe Gavin smiles though his plate appears empty. The gals lived it up with sack races and delightful absurdities-in-action, and there's a strong suspicion that the guys and small fry did the same—and why not when the weather was as beautiful as it was that day! And after all, isn't that the heart of a Grumman Family Picnic—no matter where it's held. A day to relax, to enjoy yourself. Under those sunny southern skies, can the hospitality have been any warmer?

Four hit suggestion jackpot for $4,650 in Savings Bonds

There's a different twist to the latest Employee Suggestion story, and a satisfying ending for three men who arrived at the same conclusion. Joe Thornton of F-14 Fuselage Major Assembly, Plant 1, is richer by $1,850 in Savings Bonds because he filed the suggestion. Rocco Famiglietti and Alvin Beyerlein of Major Sub-Assembly, F-14, Plant 1, each got $925 for a "job well done," pursuing the idea and actually demonstrating that it would work better than the old way. Many thousands of dollars are saved by the suggestion, which has been adopted throughout Plant 1 on the F-14 production program.

The F-14 is built on a modular plan, with parts coming from various areas of the plant to be assembled and then installed. The parts had been reaching the mechanic in a tote or a box, packaged in plastic and labeled by assembly number. The mechanic thereupon had to search around in the container for the parts he needed for his operation: a time-consuming task. Accountability was lost, problems with shortages grew, frustration was experienced in all departments.

Both Thornton and the Famiglietti-Beyerlein duo thought this was a great waste of time.

For example: an access door would come with its hinges and other parts in separate packages and the mechanic would have to look through the box to find all the pieces to complete his operation.

Joe Thornton, a leadman in Fuselage Major Assembly, Plant 1, suggested that all the parts for an operation be kitted together, so that the mechanic would have everything he needed to start work. How did he arrive at his $1,850 winning idea? "I've been inconvenienced," he asserted.

Thornton is a 20-year man, a resident of Levittown with his wife, Edith, sons Joe Jr. and Steve, daughters June and Linda. He plans to take a trip with some of his new wealth and fix up the house some more. He formerly worked in Plant 27 on the A-6.

'Show and tell'

Alvin Beyerlein and Rocco Famiglietti pushed the idea through by demonstrating the advantages. "Show and tell," commented Beyerlein, who is a 20-year man. He's a leadman in Major Sub Assembly and he's been on the F-14 Program since its early days. He and his wife, Dorothy, and Doreen, Alvin, Frederick and Allison, ages 15 down to 9, like the $925 award. They're fixing a place upstate that was formerly a schoolhouse, made into an all-year cabin, and it's a great place for snowmobiling.

Famiglietti worked with Beyerlein on setting up the display that proved to supervisors that the new system of kitting would not only save time but would give better control and accountability, traceability, shortages, and modifications. Famiglietti has been with Grumman seven years and before he worked on the F-14 he was in Production Control. He, his wife, Pat, and Darlene, 6, and John, 4, live in Central Islip. He's well known around the Company as an accordionist at picnics and parties.

Beyerlein and Famiglietti earned another award, of $50 each, for another F-14 production aid.

A $950 award to Bill DeModen of Templates, Plant 16, is his fifth bond award in 33 years. (He was also one of the first 10 to get a ruby Project Sterling pin.) For 27 years he's been a template maker, and that's not all he knows how to do. When he retires in the not-too-distant future he's going to enlarge his own nursery business in the propagation of evergreens, azaleas, and rhododendrons. He and his wife. Camille, live in Fort Salonga, Northport. They have two grown daughters and four grandchildren.

Bill DeModen's $950 in Savings Bonds was for universal holding fixtures he devised for saw-cutting honeycomb parts. Thanks to the universal holding fixtures, many details can be cut with a bandsaw without the necessity for individual holding fixtures. About 74 hours are saved on each F-14, the Committee found, and other universal fixtures have been developed using the same idea.

Other bond awards were:

$225: William O'Connell, Stockroom, Plant 3.

$175: Amza McCarthy, Paint Shop, Plant 3; Lillian Nigro, P/S Pricing, Plant 34F.

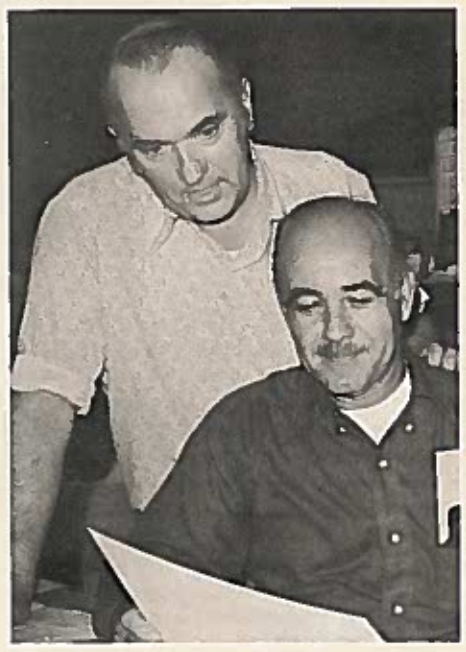
$125: Harry Owen, Publications Operations, Plant 34E; George Vengroski, Electrical Installation, Plant 1.

$100: Robert L. La Manna, Boron Composites, Plant 3; George Neyssen, Final Assembly, Plant 6.

$50: Alvin Beyerlein, Rocco Famiglietti, Robert Lentino, and Frank Rule, Thomas Butler and John Pattersen, all of Mid-Mod Assembly, Plant 1; Harold Osswald, Joining, Plant 1.

'Job Well Done.' For demonstrating to F-14 supervision in Plant 1 the feasibility and time saving of kitting by operation instead of by assembly, Rocco Famiglietti (L) and Alvin Beyerlein each earned $925 in Savings Bonds. System has been accepted in all departments in Plant 1. (Photos by Bob Settles)

Train of thought. A suggestion made by Joe Thornton, Fuselage Major Assembly, Plant 1, saved a lot of searching and led to different kitting of F-14 detail parts.



His fifth. Bill DeModen of Templates, Plant 16, received $950 award for fifth bond-winning idea in 33 years. His idea: universal holding fixture for honeycomb.

CALENDAR of events

Notice of events for period Nov. 27 - Dec. 11 should reach Plane News by Fri., Dec. 1.

Amateur Radio Club: Wed., Nov. 15, 5 p.m., WA2LQO Radio Shack on the roof of Plt. 5, nomination of officers for '73, open to outsiders for '73, no guest spkr. E. Goodman, Ext. 87125.

American Prod. & Inventory Ctrl. Soc.: Tues., Nov. 21, 6 p.m., Holiday Inn, Plainview, at L.I.E. & Sunnside Blvd., L.I. Chap., group partic. in a Harvard case study, spkr. John Udaloy, open to outsiders. Norm Heilwel, Ext. 7629.

Amer. Soc. for Metals: Wed., Nov. 15, 6:30 (dinner), King's Grant Motel, Plainview, Arnold Holstine, Air Safety Investigator, on "Ways on Aircraft Accidents." Joel Greenspan, Ext. 2021.

Dance Club: Beginners, Tues. evgs., 8:30-10 p.m., St. Francis of Assisi, Northgate & Clay Pitts, Greenlawn; intermed., Thurs. evgs., 8:30-10:30 p.m., Portuguese Amer. Hall, 306 Jericho Tpke., Mineola, $2/session. Len Luke, Ext. 1438.

Duplicate Bridge Club: Every Thurs., 5:45 p.m., Plt. 18, ACBL sanction, partner guar. Dan Panshoukian, Ext. 2798.

Ex-Servicemen's Club: Wed., Dec. 6, 7:30 p.m., Plt. 28, reg. mo. meeting. Al Kordula, Ext. 87259.

Fencing Club: Mon. & Thurs., 5 p.m., Plt. 30 cafe, instruction & competition. George Kengney, Ext. 7541.

Flyng Club: Sat., Dec. 9, 9 p.m., Holiday Manor, installation dinner, open to outsiders. Ed Schledorn, Ext. 3107.

Retiree Club: Wed., Nov. 29, 1:30 p.m. Holiday Manor, reg. mo. meet. GAA, Ext. 2133.

Soc. Aero Mtls. & Proc. Engrs.: Tues., Nov. 14, Mariott Hotel, Saddlebrk., N. J., dinner at 7, $6; B. H. Johnson, Esso Resch., "High Temp. Thermoplastics." Leonard Poveromo, Ext. 9155.

Soc. Logistics Engrs.: Thurs., Nov. 16, 5:30 p.m. Old Cntry Manor, Hicksville, R. Basset, V.P., Cities Serv. Tanker Corp., on "From Oil Well to Gas Pumps via Tanker." Darwin Green, Ext. 9652.

C.U. offers longer term for loans

If you're looking ahead to improving your home, or buying a car, or picking up a boat, or whatever, why not "Think Credit Union"—especially now that you have four years in which to repay a loan.

Yes, the Board of Directors of the Bethpage Federal Credit Union has now extended the borrowing period from 36 to 48 months on loans from $2,501 to a maximum of $20,000 at the lowest interest rate available (10.2 percent true annual rate). In addition, free borrower's insurance is provided, up to a loan level of $10,000.

There are a couple of other conveniences, too: a "passbook" loan (subject to a lower rate of interest because you're borrowing your own money), and a payroll deduction system that saves you the bother of writing a check each month.

So, if you're thinking of borrowing, check the Credit Union.

Canoes on sale

Why not give someone a Grumman canoe for Christmas? It's a great idea when you realize there's a sale on them right now . . . standard canoes, 15-20 feet long . . . light canoes, 13-18 feet long . . . square-end canoes, 15 and 17 feet long . . . also Car Toppers. Contact any Employee Services Office.

Their job isn't done until they've reached the limit

If he wants to be successful, an artist has to have a full understanding of the medium in which he's working. The same mandate applies to people who want to design new structures: they have to know the advantages and disadvantages of new materials—new alloys and metals and composite materials such as boron.

It can be a long and exacting task. As Mil Griffiths, head of Structural Test, phrases it, "The things you do before you design something are critical, and you learn very quickly that 'simple solutions' can turn to worms. As tedious as it may be, you have to analyze and test, test, test, and test some more. I can tell you of cases — well-known and obscure — when the failure to do an adequate test job put companies out of business."

And that is a real, down-to-earth expression of the necessity for in-depth, early testing. It's the type of activity that goes on daily in Plant 12's Materials and Processes Department where Dave Layton heads up the Elements and Materials section. Layton sees his job as taking place in three distinct sections of the lab: a room for metallic evaluations, a temperature-humidity-controlled area, and an adjacent physical structure dubbed the "mega-pound facility".

"In each of these places," says Layton, "we're doing basically the same thing: trying to test materials in such a way that we can pass the word to the designer that such and such material can be used within rather rigidly defined parameters. In a sense, we're giving an OK to work with the material under specified conditions, or barring use of a material for a designated use. And we'd better be right!"

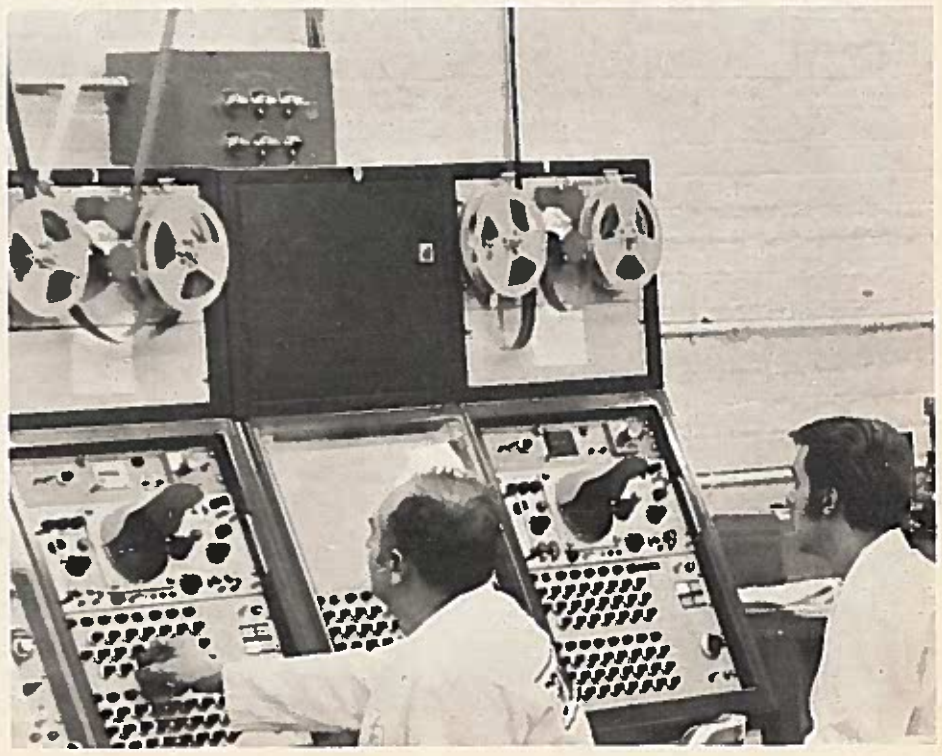
Translate concepts

Layton's group (about 20 engineers and technicians) has been right; and that's why they're still around, and respected. The respect has come from all areas involved in testing in Grumman . . . from Production, from Research, from Manufacturing, and so on. "After all," says Layton, "we're a service agency. A man or woman has a materials problem and we work to translate a concept into reality, or validate a design structure."

For testing of metallic samples, there are two basic types of approaches. One deals with the static (or fatigue) effort; that is, a constant single-level amplitude test sequence. You load a piece of material and discover how long it takes for it to fail, under known loads. It's also posssible to vary the loads and program them. They "see" a spectrum of stresses, which are controlled by a tape system.

Layton speaks of a six-month testing program on a particular type of fastener, and it all boiled down to a single question: "Can we substitute that fastener — which costs less — for the one in use?" Six months — on one fastener! "If it takes that long, or longer, to be sure," says Layton, "then we haven't wasted any time."

Tests of non-metallics and composites must be done in a different way because the foundation thought here is to establish a standard by which objective differences, under constant conditions, can be made. The "constant conditions" exist in the temperature-humidity-controlled room. To measure differences in a test environment, there are relatively small chambers in which either a metallic or non-metallic specimen can be tested to discover what happens to it under various temperatures. For example, how much heat or cold can a boron composite withstand without deformation or loss of critical qualities? It's not an idle question: as technologies have advanced, vehicles have been increasingly exposed to tem-



perature extremes, and finding the "right" material (certainly one that will not fail), is crucial. And by the "right" material, lightness is usually a factor, too; heaviness is a penalty in flight structures.

A few steps away from the main building at Plant 12 is the "mega-pound" facility which can apply static and fatigue loads to one **million** pounds. Not only that, the facility can accept large-size structures, some as long as 12 feet. The machines, built to Grumman specifications by MTS Corporation, can handle a static or cyclic load. The weld area of the titanium box beam — which was more than an inch thick — could have been tested there. "Never before," says Griffith, "have we been able to evaluate such a large piece properly. Before, we had to work with small pieces of material and draw conclusions at that point, so there was an educated 'guesstimate' involved. Now we **know** what we have."

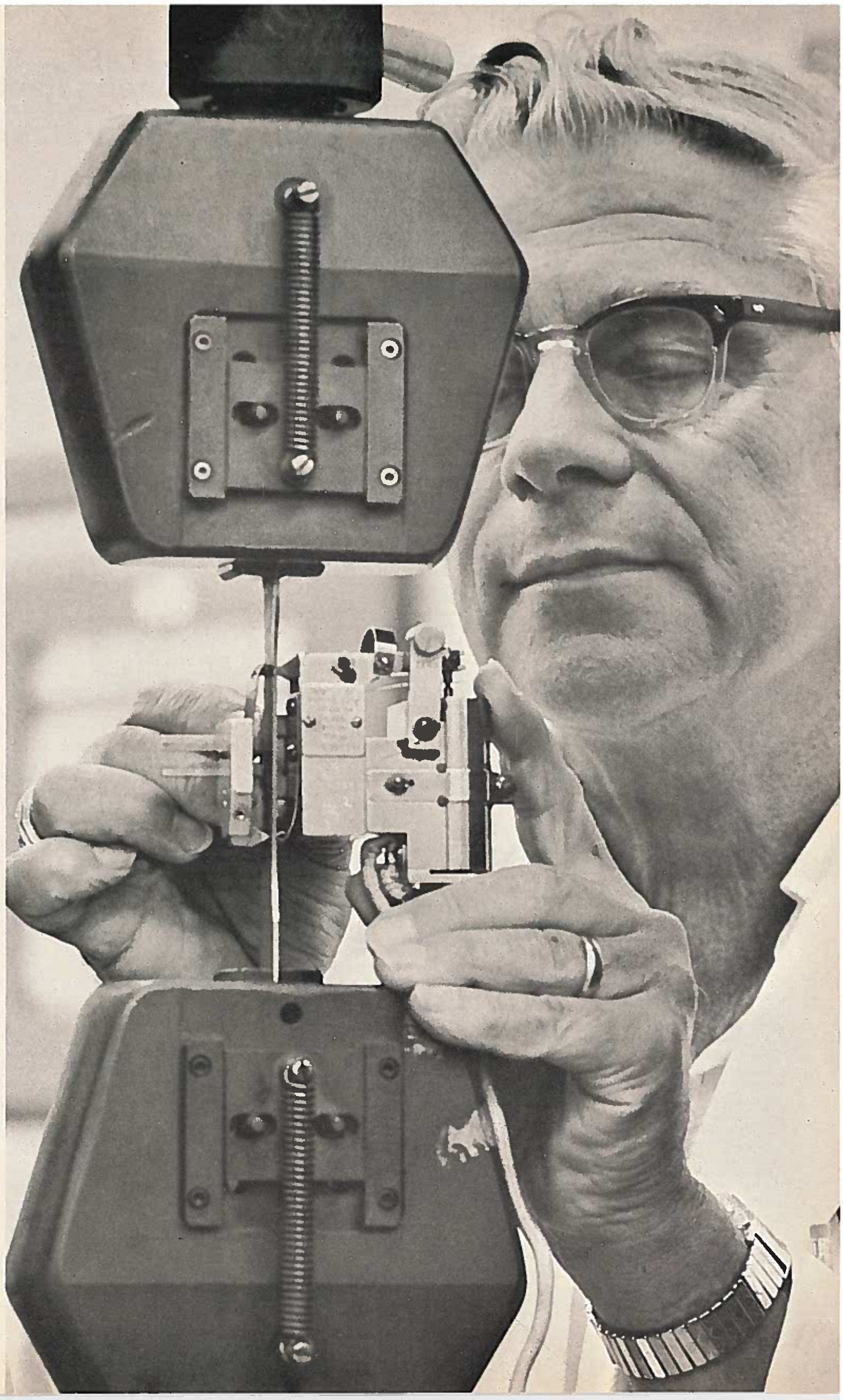
Failure 'record'

Nor does the mega-pound facility just sit there, inert, rock-like. The machine, Layton explains, "has sensors and can be programmed. Tests can be run automatically, without anyone there to monitor it. If something goes wrong, it shuts down automatically. Since everything is taped, when an engineer comes in in the morning, he just plays-back the tape and he has the record of what went on.

"Moreover, if there's a need to do a lot of fatigue testing, the mega-pound facility can be the answer because it can accomplish in 14 hours what used to take 140 hours—generally speaking.

It should be pointed out, too, that Layton's section responds to three different types of effort, each roughly of the same proportion: internal research or advanced development, external project work (say, for NASA or the Air Force), and support of vehicular programs.

Griffiths adds another dimension to the lab and its work. "These 20 people may have specialties, particular talents and abilities and interests, but they're attuned to look at the total job, and any one of them can do any of the range of job tasks. So, if a man is out, somebody is there who can take over, and take it in stride. That's extraordinary flexibility!"



Specimen testing. **In the Materials and Processes Lab at Plant 12, lab technician Jim Rembert (top, L) uses a Universal machine to apply test loads while (bottom) Harry Saulnier and Bob Kriston, lab technicians, monitor and control spectrum fatigue consoles. At right, Al Boehm, also a lab technician, mounts an extensometer to determine material tensile properties. (Photos by Marie Trimborn)**

Hoffman catches up in a hurry, hits 278 mark in Blue action

It has taken Marty Hoffman a little while to get the hang of this game called "bowling," but he's learning, he's learning. Marty, who's been throwing the ball down the alley for three years now, took an early lead for high-game honors in the Blue league by flipping a sparkling 278. Considering his average going into the round was a modest 134, you can well imagine that Marty was a little excited about the mark.

Marty Hoffman

The former Facilties Maintenance man —a couple of years at night college earned him a spot on the A-6 business team—had a personal high of 236 before his spree. And though his 582 didn't help the Misfits climb very high in the team chase, Hoffman certainly did give his Blue league mates something to shoot at for the rest of the year.

Among the other Blue highlights were Rich O'Neil's 221-219-617, Al Giacoia's 229-612; Pat Fischetti's 213-598, and Berger Peterson's 237-591. . . . The Jejos have something going for them besides a screwy acronym for their first names. Ed Campbell punched out a solid 256 to set a Patchogue Mixed record while totaling 584, good enough to keep the Jejos atop the league. Other bright spots included Gene Burgess' 225-574, Dave Struller's 211-591, Dot Von Glahn's 222 (also a record), and Joan Burgess' 474. . . . Classic loop features included Dick DiDonato's 219-200-611, Tom Carroll's 207-600, Bud Earhart's 209-589, and Murray Duff's 212-555.

Somebody's trying

The way things have been going for the high-scoring keglers in the Red loop, it must be reassuring to know that there are nights when the pins **do** all fall down. There has been a "600" pin famine in the league, but Herb Pirkl did his bit to break the hex recently as he shot 202 and 236 for a record 636 in the action. Following Herb was Stan Domagala's 200-218-588 and George Eyring's 200-561. Earlier, Tom Hansen's 200-200-565 led the pack. Don't give up guys, there must be a couple of strikes left in that wood.

Charlie Catalano's 214-216-585 set the scoring pace in the Classified circuit and kept the Ten Pins in front of the Mustangs in the team chase. Rounding out that action were John Donovan's 573, Bob Dudonis' 214-571, Joe Loverich's 200-567, and Bob Ruotolo's 200-571.

Rudy Dunkley's at it again. Rudy threw 628 in a recent session of the Bethpage Nite Owl loop with help of 231 and 222 games, and earlier scored 238. Bill Schramm reached 618 with 211 and 220 games, Harry Haase scored 211, Marty Susa, 202, and Peggy Kolody, 179. . . . George Moritz registered 230-613 to headline play in the Hawkeye Mixed league, but it was Arlene Schwemmer's 554 that set a record, erasing a 516 mark held by Dot Jacobsen. Earlier, Dot hit 202-509 and Phil Barton closed with 567.

This 'pot' he'll admit to

It ain't often that a secretary gets to put his name on top of the list. So it must have been a rewarding experience —after all, there are still "pots"—for Ernie Neves to discover that his 223-600 copped individual laurels in a recent Black league session. Among recent highlights were Walt Stehlin's 574, Frank Apa's 200-551 and 204-571, Jim Richter's 217-582, and Ted Dija's 208-563. . . . Julie Gagliano's 548 and Nancy Gentzlinger's 223 provided the ladies in the Century Mixed loop with a couple of improved records to shoot at. Nancy's high game—she closed at 534—was good enough for league honors in the last two rounds, with Walt Bruckert's 217 and Bill Kallansrude and Phil Musa stopping at 200. Kallansrude and Bill Gentzlinger kept some semblance of male domination—is that a sexist remark?—in the competition by outscoring Julie Gagliano's 548 with their 558 and 551 totals.

Way to go, Frank

In the Trader loop, Frank Nelson combined games of 211 and 217 to reach 619, third highest in the league this season. Ken Smith closed at 590, Al Marhold scored 202-571, Don Entwistle, 210-574, Charlie Howard, 200-574, and John Logan, 215-577. . . . Anytime the bowling is less than outstanding in the Syosset Mixed circuit, they can always scan the team names for laughs. How about Goldfingers? Or Anotha Fine Mess, or 3 Creeps and Me? And just what **is** the name of the first-place team? It was no time for laughing, however, when Rita Mathia collected 560 and a 234 game, both records in the loop. Other highlights: Joe Adamo, 222-577; Stan Nilsen, 569; John Betterino, 553; Pat Galloway and Bernadette Gately, 487.

Aerospace mark falls

Tom O'Connor's 615 came on thrusts of 209 and 207 and was good enough to erase Joe Gallo's former 608 series record in Aerospace competition. In that action, Randy Dorn shot 212-568; Ed Lomot, 222-560; Joe Gallo, 235 (a record); Ted Dija, 234-557. . . . Rounding out the high spots: **Woodbury Mixed** - Hal Lessmann, 214-600; Kathy Degnan 169; Carol Mayer, 477; George McGrellis, 234; **Gray** - Harvey Knopf, 242-615; Nate Kirschbaum, 237-613; **Rocket** - Larry Schneider, 218-580; Paul Bello, 220-551; Basso, 569; Reiner, 573; Schneider, 208-205-605; **Masters** — Ray Zeller, 246; Ray Herz, 789; Ray Sawey, 236-779; Walt Stehlin, 779.

Hilton's form near perfect as he fires record rifle score

You could say George Hilton started the season off with a bang—you could say it, but you had better not, at least in front of George. You see, Hilton did, in fact, start the season off with a bang as a member of the Grumman Gophers rifle team that competes in the L.I. Industrial league, and during the opener against Pan Am, George fired a record 199 to pace the 775-717 victory.

He got help. Hank Womble shot 197 in the .22 caliber competition, while Ed Brandis contributed 190 and Bob Lang, 189.

In hitting ihs 199 total, Hilton scored a perfect 50 in three of the four shooting positions, prone, kneeling, and off-hand (or standing). His one miss came in the sitting position. Some time ago, team mate Hank Womble also shot 199 in league competition, but according to National Rifle Association rules, when scores are identical, whichever competitor has the highest score in the most difficult position — off-hand — shall be the record holder. Womble, who had 49 in off-hand and perfect 50s in his other three positions, lost out to Hilton.

Although the range for .22 caliber competition in only 50 feet, the bull's-eye makes it seem longer — that's only one-eighth inch in diameter.

Near miss

Earlier—much earlier, in fact—the Gophers journeyed to Wallingford, Conn., last July to participate in the state small bore championship. Although they didn't finish first, Hank Womble, Ed Brandis, Joe Anckner, and Bob Mansbart did complete the action a close second to the winning Army Blue team.

Winning has become a habit for the Gophers in the L.I. Industrial league. There are very few people around who can remember the last time the Gophers lost a league championship — and the team apparently means to keep it that way.

On their way

Mike Baumgarten has set his sights on another team championship for the Grumman C squad in the L.I. Industrial pistol league's .22 caliber sharpshooter division. His 273 and 260 in recent matches helped pace 986-898 and 976-949 over Pan Am A and Grumman E teams, respectively.

The Grumman Bs jumped off to a healthy start too, and now sport a 2-0 record in the division after a 996-966 victory over Republic and a 1,040-998 win over IBM. Doug Crooks and Mort Weinberg shared scoring honors in the action with 254 and 264, respectively.

George Hilton

IBM also bounced the Es, 978-893, with Tom Cassino's 241 the high mark for the Grumman squad.

Ron Trenker's 265 led the Grumman Gold's 1,039-1,032 decision over Brookhaven National Lab in the league's expert division.

Rice still at it

In center-fire competition, Dave Rice came through with a sparkling 284 as Grumman rapped Sperry, 1,053-880. Greg Criscione's 271 helped the Grumman squad rack up its third-straight decision in the loop.

No Trevino, but . . .

Will the silver-plated Dixie cup holder awarded the winner of the first Grumman-Norden Golf Classic ever rival the Old Oaken Bucket as a symbol of team competition? Maybe not, but a lot of guys from Grumman and Norden had a helluva lot of fun vying for the trophy a couple of weeks ago.

Although Frank Rego of Norden earned individual scoring honors with an 88 — he nipped Grumman's Joe Marsdorf by a shot, the Intruder team from GAC copped team laurels with an incredible scoring barrage, averaging 104.9 to 105.1 for Norden. And considering that display of shotmaking, will the Pelham Golf Course ever be the same?

After compiling an outstanding record in the Plant 34 bocce league this summer, the Mistakes completed a 3-0 sweep in the playoff series against the second-place Jacks and a Jill. It wasn't easy, though.

The first two games were hard-fought 15-13 victories for the Mistakes, and only some clutch pitching by Tony Azzara, Tony Cusamano, Jerry Minerva, and Mike Gurello kept the Jacks and Jill out of the winner's column.

In the final game, the Mistakes outdistanced Harry Kuhlman's Jacks and Jill with a 15-5 win. Other winning members included Frank Magri and Ralph Gonsalves.

Dima, Peckham 'best-in-show' at Art-Photography exhibit

There were a lot of "almosts" in the Grumman Art & Photography Show, held in Plant 28 November 2-4—and that was some indication of how strong the competition was. The two who won Grand Award and $100 Savings Bonds — Frank Dima, a newcomer to the Grumman Art Show, and Frank Peckham, a seasoned photography winner—had for competition a portrait and a color slide, respectively. "It was hard to make some of the decisions," commented Charlie Sheets, one of the judges. "This was a superior show."

Frank Dima's first-place winner and Best in Show was in the Oil Landscape category: a chilly representation of yellow brick buildings in a snowy setting. He did it from a 5 x 7 magazine illustration when he was recuperating from an ankle fusion in Florida. Dima works in oils with a brush and a knife but for certain textures — foiliage, for example—he uses steel wool. He made his own appropriate frame. Dima says his only art instruction has been in an adult education course. He works in Quality Control and has been with Grumman seven years.

Photo standout

Frank Peckham, whose black & white photo of a dramatic sky and a little boy racing toward the camera earned a first and Best in Show, won a first also in Still Life & Abstracts and another first in the Architecture class. He also took a second in Animals & Nature. Peckham works in Methods Engineering, Plant 2.

Outstanding, too, was Howard Gilbert's "rain drop in a wind." This was a nine-inch sculpture in bass wood, coated with about 15 coats of clear lacquer and hand rubbed to an unbelievably mirror-like finish. Gilbert, a 10-year man, belongs in the Model Shop, in Plant 5 but is temporarily on loan to the Machine Shop in Plant 3, working nights. He's been pursuing his hobby for about six years.

Other first prizes in art included Brenden Berger's large-scale portrait of an old man with a cat. ("He roomed at our house in the city.") Berger has been with Grumman four months, in Alodine, Plant 2. He got his training in portraiture at the Art Students League in Manhattan.

Times have changed

Pete Schumacher, of A-6 Planning & Controls, Plant 25, formerly of Presentations, took first in water color with a scene near Huntington Harbor.

Commenting that "styles in photography have changed" since he was active in camera clubs, Bill Zarkowsky, Vice Chairman of the Board of Grumman Aerospace, presented the awards. He commended the winners on their talent.

Chet Baumgartner was in charge of the show, which drew 369 photographic entries and 99 in art. The judges of the art were Neil Fogel of Nassau Galleries Ltd. and Ray Johnson of Pictures on Exhibition Ltd. Charlie Sheets and Dick Waldmann of Presentations Services judged the photography.

Tops in show. Bill Zarkowsky, Vice Chairman of the Grumman Aerospace Board and an amateur photographer himself, was on hand at the Art-Photo show to present best-in-show awards to artist Frank Dima (L) and photographer Frank Peckham. (Photo by Bob Settles)

The winners in the **Art Show** were:

Oil, plastics, acrylics - landscapes, seascapes: Frank Dima, 1 & Best in Show; Bill Christ, 2; William Horton, 3.

Oil, plastics, acrylics - non-objective, abstract, still life, misc.: Frank Mulvey, 1; Alfred Stern, 2; Anthony Arroyo, 3.

Oil, plastics, acrylics - figure, portrait: Brenden Berger, 1; George Haraden, 2; John Peralo, 3.

Oil, plastics, acrylics - nature: Vincent Skittone, 1; Alfred Stern, 2; Charles Edgette, 3.

Watercolor: Pete Schumacher, 1; Paul Cesare, 2; Curt Dolderer, 3.

Pastels: Don Johnson, 1; Alfed Stern, 2.

Black & white, graphics: Charles Korrow, 1; Peter Piazza, 2; Michael Milewski, 3.

Sculpture: Howard Gilbert, 1; Aage Pontoppidan, 2; Ashley Fernandez, 3.

The winners in the **Photography Show** were:

Black & white prints - scenes & misc.: Frank Peckham, 1 & Best in Show; Louis Royce, 2; Harold Wicker, 3.

Black & white prints - still life & abstracts: Frank Peckham, 1; Herbert Denaci, 2; Harold Wicker, 3.

Black & white prints - people & human interest: Harold Dunayer, 1; Harold Wicker, 2; Alan Agdern, 3.

Black & white prints - animals & nature: Harold Wicker, 1; Frank Peckham, 2; Peter Schumacher, 3.

Color prints - scenes & misc.: Ernest Simpson, 1; Frank Baldi, 2; Victor Sekelsky, 3.

Color prints - still life & abstracts: Richard Gornik, 1; Frank Baldi, 2; Mitchell Albinski, 3.

Color prints - people & human interest: Harold Dunayer, 1; Frank Baldi, 2; Emmett Goodman, 3.

Color prints - animals & nature: Herbert Denaci, 1; Ralph Scarborough, 2; Victor Sekelsky, 3.

Color slides - scenes & misc.: Walter Demchuk, 1; Joseph DeClemente, 2; Bill Moran, 3.

Color slides - still life & abstracts: Walter Demchuk, 1; William O'Neil, 2; Ed Keonjian, 3.

Color slides - people & human interest: William O'Neil, 1; Mary Mandala, 2; Alan Bjornsen, 3.

Color slides - animals & nature: Bill Moran, 1; Walter Demchuk, 2; Jerry Wachtel, 3.

Architecture: Frank Peckham, 1; Jean Pailet, 2; Joseph Sinicki, 3.

Snapshots - Joseph Sinicki, 1; Douglas Keuling, 2; Dolores Stierle, 3.

Praise for Copernicus team

The following letter was addressed to Dr. John F. Clark, Director of the Goddard Space Flight Center at Greenbelt, Md.

. . . Congratulations for the initial successful operation of OAO-4, now appropriately named Copernicus. It was a very long time from conception of OAO-C to the birth of Copernicus—perhaps proving the old adage that the "impossible" takes a little longer. However, the fact that Copernicus to date is exceeding by a wide margin its stringent performance specifications convinces me that some of the impossible tasks of the future need not take so long.

Please extend my personal appreciation and warmest regards to the entire GSFC, Grumman, and Princeton team, along with others who contributed to the successful start of this latest Orbiting Astronomical Observatory. To date they have confirmed my assessment of them which I stated at the Executive Review before the launch—**they are the most competent and dedicated technical team in the business** (emphasis added).

/s/ Jesse L. Mitchell
Director, Physics and Astronomy Programs
NASA

Pilot's view of Tomcat

Don Evans, F-14A Structural Test project pilot, will be guest speaker at the Society of Flight Test Engineers, Long Island Chapter, on Tuesday, November 14, at Plant 30 Cafeteria. His subject: "The F-14A Fighter—a Pilot's Impressions," and Flight Test Progress Report. Cocktails will be at 6 p.m., compliments of Grumman Aerospace. Dinner is at 7, and wives and prospective members are invited.

Evans has flown the F-111B, A-6, and F-14A as a Grumman test pilot and has accumulated 6,000 hours of jet fighter flight time. He has flown all USAF high performance fighters.

For tickets call one of the following by November 14: Ray Whipple, Ext. 895; Ross Bracco, Ext. 891; Don Pooters, Ext. 2301; or Michael Neyssen, Ext. 9925.

Handball king

Bob Montague and Nick Bincarowsky went down to the final game of the Bethpage handball singles tourney before Montague came through with a 21-13 victory to claim the crown. Bincarowsky had been knocked out of the winner's bracket by a 14-21 loss to John Geremia, while Montague had breezed through four opponents to reach the finals.

In their first encounter, Bincarowsky rapped Montague, 21-17, to even up their losses at one in the two-defeats-and-out tournament. Then, with the handball title on the line, Montague rebounded to clip Bincarowsky, 21-13.

Earlier, Montague had defeated Norm Trigg, 21-11; John Zito, 21-14; Tom Jenkins, 21-10; and Geremia, 21-12.

Travelers cuts premium rate

Since 1969, The Travelers Insurance Companies has made available through the Grumman Financial Services Plan the opportunity for persons to discuss their personal insurance needs, problems, or questions with a professional insurance counselor. In addition, Travelers has made available various types of insurance that could fulfill these individual needs, with premiums to be paid throug the convenience of payroll deductions.

Last week, Travelers announced that it had filed with New York State a rate reduction, averaging about eight percent, on automobile insurance. According to Paul Vandenbergh, unit supervisor for Travelers at Grumman. "This means that almost all who are presently insured through the Grumman Financial Services Plan will enjoy a lowering of premium as their individual insurance policies come up for renewal. And for those not presently participating in the Financial Services Plan, we would like again to extend the offer of obtaining a premium quotation as your automobile insurance comes up for renewal."

Travelers has written approximately 9,000 policies of life, auto, and homeowners insurance since the Financial Services Plan was initiated three years ago. Should you be interested in obtaining advice—without obligation—on your personal insurance needs, you may arrange for an interview to get premium quotations by contacting a Travelers representative.

Wanted

GARAGE: Roomy, 2 car, shed, etc., to rent in Hicksville area, for auto. & eng. mechanics hobby. WE 1-1176.

PUPPY: Labrador retriever, 4-8 wks., also would like to communicate w/someone familiar with breed. Roy Van Cott, Ext. 3908.

TRAINS: Lionel & American Flyer, for cash, any cond. & age. JU 4-6771.

REFRIGERATOR: 2 or 3½ ft., 12 v/DC, 110v/AC. 543-7768.

STAMP COLLECTION: U.S. & world wide. 586-3521, after 6 p.m.

CLARINET: B Flat, for student. 433-5282.

MUSTANG: '66, immaculate, V8 fastback; also 8 or 10 overhead gar. door; rotary sander; work bench vise; portable paint spray compressor & tank; fluor. light fixtures. 757-1920.

CHEV.: '70 or G.M.C. pick-up, 350 cu. pwr. steer & bks., auto. hd. suspension. PY 8-0200

FURN: Old oak din. rm. tbl., chairs. buffet, china closet, etc. 938-6522.

MACHINES: Mimeograph or Ditto reproducing, used. 265-8565.

HOMES: For puppies, 5 male, 2 female, ready at end of Nov. 543-6319.

ROD & REEL: For surf casting, good cond. Dot Kappenberg, Ext. 1617.

Car Pool

FOREST HILLS: Yellowstone & Queens Blvd., to Pl. 2 or 5, 7 a.m. - 3:30 p.m. 212-544-5553.

WHITESTONE: Bayside, Flushing, to Plts. 35, 30, 14, 15, 8-4:30 p.m. 212-423-4097.

RIVERHEAD VIC.: To Plt. 25, 8:12-4:42 p.m. 728-2772, evgs.

BRENTWOOD: Via Wicks Rd., to Plt. 30, 8:30-5 p.m. 231-5322.

DEER PARK AVE.: S. St. Pkway, to Pl. 7. 587-8158.

BROOKLYN: Bay Pkway. via Belt Pkway, to Bethpage. CL 6-0413.

NO. BABYLON: Southern Pkway. vic. to Grumman, Plt. 35, 8-4:30 p.m. Barbara, 587-4217.

KEW GARDENS: To Pl. 1 or 4, 8-4:30 p.m. 441-9529, wkdays.

BROOKLYN: Belt Pkway., to Plts. 1, 2, 3 & Whse areas, 7:30-4 p.m. 212-253-8525.

For Rent

HOUSE: Hauppauge, 3 bdrm., 1½ bath, liv. rm., din. rm., eat-in-kit., fam. rm., 2 car gar., full bsmt., Nov. 16 occup. 724-0562.

ROOM: Hicksville, pvt., clean, 3 min. from Grumman. 935-2466.

HOUSE: Four bdrm. ranch, 2 bath, fam. rm., 2 car gar., avail. Dec. 1. 864-8646.

APT.: Flushing, 2 fam. house, 6 spacious m., 3 bdrm., gar. 212-225-8776.

HOUSE: Centerport, L.I., 2 bdrm., lrg. liv. rm., firepl., 1½ bath, kit., gar., quiet, ask. $275. + util. HA 7-2793.

ROOM: Furn., pvt. bath, nr. Grumman. 796-8106, after 5 p.m.

APT.: 3 rm., sundeck, pvt. entr., business couple only. 423-0306.

APT.: Garden, 3½ rms., Roslyn Hts. area. 484-2264.

SKI HOUSE: Stratton area, new, shares avail., singles or couples. 751-3667.

HOUSE: 2 bdrm., appli. inc., washer & dryer, Lake Panamoka, 5 min. from Grumman-Calverton, $185/mo. + util. 722-3934.

APT.: Lake Ronkonkoma, garden, 3½ rm., air cond., dishwasher., sub-lease until March '73 for $170. 981-0098.

ROOM: Furn., Plainview, incl. use of kit. & din. rm., $30/wk. WE 8-6999.

APT.: Studio, sleeping alcove, walk-in-kit. & closets, sub-let, lease runs for yr. & 5 mos. 935-9696.

ROOM: Farmingdale, lrg. rm., bath, pvt. entr., gentleman only. CH 9-7719.

APT.: Bethpage, nr. Plt. 30, 3 rm. 938-5972, after 5 p.m.

ROOM: Furn. studio, Levittown, refrig., pvt. entr., share bath, suit. business woman. 735-0602, evgs.

Lost

BICYCLE: Man's, Rollfast, one fender, rusty red, pvt. property, removed from Pl. 7 Trlr. City Oct. 8. Charles Hedberg, Ext. 657.

Ride Wanted

AMITYVILLE: Fem., Plymouth Dr. to Pl. 5, 7:55-4:25. 598-2055.

ST. JAMES: Smithtown, Nesconsett, Hauppauge, to Plts. 1, 2, 3, 7:30-4 p.m. 862-9099.

For Adoption

PUPPY: Male, 4 mos., house broken, very gentle, likes dogs & cats. 231-8442, after 5:30.

DOG: Mixed breed, 2½ yrs., male, friendly, good /older children, trained, must find new home. 698-3081.

For Sale

TV: Magnavox 19 in. color, tbl. model, recent. overhauled, $110.; match. tbl., $15. MY 4-2805.

CAMERA: Yashica 124-G, 2¼x2¼ tlr., new w/warr., $80. 212-923-8509, evgs.

POOL TBL.: Sears 8 ft., 2 yrs., must sell, $125. 796-4575.

For Sale

FALCON: '66 Futura sta. wag., inspect., proof of mechanical reliability, $450. 862-9260, after 6 p.m.

OLDS: '66 Vista Cruiser, pwr. steer. & bks., fac. a/c., tilt wheel, cruise control, 62,000 mi. 732-4261.

PLYMOUTH: '67 Belvedere II hdtp., air cond., V8, auto., pwr. steer & bks., new batt., snows w/rims, $1,095. 269-9284, after 4:30.

BOAT: Chris Craft runabout, 14 ft. plywood, 33 hp Evinrude eng., steer & controls, $425. 549-3692, after 6 p.m.

CAMPER: '72 Apache Mesa, auto., 12,000 BTU, porta potti, sink, stove, icebox, used twice, $1,550. WA 1-0227.

OPEL: '68 Kadette LS sport coupe, wh. 2 dr., 22,000 mi., 1.5 liter eng., 25 mpg, new wh. sidewalls, R&H, 2 unmount. snows, $800. 294-0999.

BOAT: '68 Duo, fbgls. tri hull, '68 electromatic Johnson eng., trlr., xtras, $800. 884-1549, after 7 p.m.

at your SERVICE

This is a free service to Grumman personnel for non-commercial advertisements, accepted on a first-come, first-served basis. Classified advertisements are carried in PLANE NEWS only on the basis that everyone replying to such advertising will receive fair and equal consideration regardless of their race, creed, color, or national origin.

Type or print ad on form available at Employees Service and Engineering counters, and send via interplant mail to PLANE NEWS, Plant 5, Bethpage. List home phone (with area code if outside Nassau or Suffolk). Limit: one ad per person per issue. No item under $10, no firearms or ammunition.

WASH. MACH.: Hot Point 16, 5 yrs., $50. 433-6733.

CABINETS: File, one 4 draw. legal size, heavy metal w/ball-bear. draw. slides for $35.; one 5 draw. legal size, fireproof lining, hvy. metal w/built in comb. lock, $40. 485-2048.

EMERYSON: Formula C, A series eng., VW trans, front dr., w/trlr. & spares, ready to race, $995. 421-5274.

CABINETS: Wh. enamel kit., 3, two floor type w/draw. & formica tops, 1 wall, $10 ea. or all $25; Sears tbl. saw, $10. 931-4614.

CAMERA: Polaroid auto. 100 w/flash, used few times, $35. HA 7-1644.

POOL TBL.: 8 ft. Brunswick Brentwood, 4 in. honeycomb bed, cues, rack, balls, $225. 757-0234.

TABLE: 36x60, 4 chrs., $25. 732-6604.

TV: Blk/wh., AM/FM radio, record player combin., 10 yrs., $150. CA 1-1660.

CHEVELLE: '66, 396 SS, maroon w/blk. vinyl int., 325 hp, xtras, $975. 643-8512, after 5 p.m.

HOUSE: Miller Pl., yr. old, 4 bdrm. colonial, 2½ bath, din. rm., eat-in-kit., liv. rm. w/cathedral ceil., conversation pit w/firepl., lrg. fam. rm., bsmt., over 1/3 acre, $51,000. 473-5157.

TABLE: Din. rm., $15; ping pong, $25; rotary lawnmower, $20; Mamiyaflex C33 camera & accessories; Scott lawn spreader, $10. 549-8927.

CHAIRS: 4 wooden kit., $20. 588-6364.

COLLIES: AKC reg., litter blue merle, male & fem. 368-0570.

MOTORCYCLE: '70 Suzuki, 350 cc, 6 sp., $595. 293-9158.

WNDWS.: Storm & screens, wood, 20 of ea. 55x31, very reason. WA 2-6517.

STOVE: 36 in. Hotpoint elec., deep-well cooker & 3 burn., $35. 486-3084.

THUNDERBIRD: '55, less than 10,000 mi. on rebuilt eng. & trans (auto.), hard & conv. tops, no body rot, $1,500. 751-5442.

CHEVELLE: '71 454 SS, turbo stick, headers, elec. fuel pump, custom lace on hood & trunk, Cragar mags & all stock pts., $2,500. 888-8794.

FORD: '62 Falcon sta. wag. 928-0183.

FORD: '62 Fairlane V8, auto., $165. AN 5-9508.

RAMBLER: '64, 8 cyl., new 4 barrel carb., new bks., $400. PE 1-3970.

VW: '69, R&H, ski rack, $1,200. 666-6369.

IMPERIAL: '66 Crown, 4-dr. hdtp., pwr. steer, bks. & wndws., vinyl top, new bks., muffler & resonator, regulator, tires & alterantor, $895. SU 1-2992.

MGB: '71 GT, wh., AM/FM stereo, wire wheels, new clutch, new start, rear defrost. RO 6-8241.

CHEVY: '64 wag., 6 cyl., stand. shift, $200. MO 7-6094, after 6 p.m.

BOAT: 14 ft. fbgls., 28 hp Evinrude, tilt trlr., windshield, top, controls, anchor, $475. 271-9097.

MOTORCYCLE: '71 Suzuki, 125 cc trail knobby tires, pwr. sprocket, $300. 586-4806.

SNOWS: Two Sears XST b-w, 8.15x15, mount. & bal. on Mercury whls., $40. SU 5-6653.

DIN. RM. SET: Table for 8, 4 chrs., blonde oak, $45. PE 5-4607.

MISC.: 6 sided steel box w/hinged door, w/latch, box 42x48x29 in. door 42x29, $10. IV 3-3369, 5-8 p.m.

CAMERA: Polaroid 800, 3x4 pictures, w/wing light & flash attach., carry. case, $15. 757-0580.

INTERCOM: Wireless, Lafayette's best, 3 sta., 3 chann., transistorized, just plug in, $20. 757-0580.

WASH. MACH.: Sear. 368-2524.

CUTLASS: '67 air cond., auto., pwr. steer., vinyl roof, 2-dr. hdtp., $650. 212-846-5048.

HOUSE: S. Farmingdale, 7 rm., 3 bdrm., attach. gar., w-w, s/s, firepl., air cond., nr. shop. & RR, plot 63x175, low tax, $39,900. 249-5084.

HOUSE: Fla. waterfr., 4 bdrm., 2 bath, liv. & din. rm. pnld., F/R. enc. patio, dbl. gar., central heat & air, nr. beaches & Patrick AFB, taxes under $400/yr., 6 yrs., avail. June 3, (178/mo. inc. taxes, int., price, ins.), or will swap, $39,990, E. A. Calvelli, 350 Riverside Ave., Merritt Island, Fla. 32952. 305-452-3057.

HOUSE: Hicksville cape, 3 bdrm., lg. kit., pnld. den w/firepl., fin. bsmt. w/kit., 2 car gar., $40,000. 938-3263.

RANCH: 3 bdrm., eat-in-kit., full bsmt., treed plot 125x100, taxes $570, w-w, s/s, Oakdale Bohemia area, $26,500. 589-1680.

COMPL. KIT.: 9 wood cabinets, sink, mica countertop w/splash, Philco frost-free refrig. 14 cu. ft. w/bottom freez., GE counter top, push button elec. range, w/hood, GE auto. elec. wall oven, $450. PY 9-8831.

SPACE HEATER: Sears, unvented, 11,000 BTU, $15. 587-8394.

BAR: Port., rm. divider, 48x18x42, walnut formica top w/ blk. vinyl front, 2 stools, $45. 822-3064, after 5 p.m.

CHEVY: '65 wag. 9 pass. w/69-307 eng., low mileage, rebuilt trans, new ball joints & muffler, lug. rack, $695. 732-6301.

VW: '65, 1200 series, $500. 586-4806.

CAMPER: '65 Cox Tent, new canvas, stove, sink, icebox, heat. 265-6105.

For Sale

VW: '68, $895. 922-0740.

MAVERICK: '70, 2-dr., blue, one owner, 4 new tires, 2 snows w/wheels. 472-1418, after 6 p.m.

PLYMOUTH: Fury II, '67, V8, 4-dr., air cond., tint. glass, auto trans., pwr. steer. lrg. trunk, orig. owner, $550. 221-4222. after 5:30 p.m.

TRIUMPH: '70, TR-6, wire wheels, AM/FM, $1,995. 234-0328.

VW: '70, sun roof, reason. 796-7240.

CORVETTE: '69, blue/blk. int. 350 cu. in., 350 hp, 2 tops, 4-spd., AM/FM, new radial tires, 23,000 mi., orig. owner. 731-5078, Bob.

GTO: '68 conv., fac. air cond., Hurst, his & hers shift, 400 cube, 365 hp, snows, red w/wh top, $1,200; '65 Austin Healey, 3000 Mk III, bright red, new fuel pump, 4 radials, elec. overdr. 212-779-2922, nights.

OLDS: '70 442, blue w/blk. vinyl top, 455 cyl, 365 hp. headers, sun gages, Astro mags, on back F60x14, fr. F70x14, FM, 8 track, beefed up auto. trans, 3.55 posi, must sell, $2,400 firm. 587-8998.

HELMET: Motorcycle, Stadium Project 4, lady's, blue & wh., made in Eng., bag. 2 lrg. pockets, red & wh., new, snowmobile mitts, small, Wolverine, nv. used, Garcia Alsop boot, ins., 1 wh., 1 red, nv. used. Jackie Brooks, Ext. 7338.

MINI BIKE: Sears, 4 hp Tecumseh, fr. & rear shocks, $110. 473-9049, after 4 p.m.

PUPPIES: Irish set., AKC, 10 wks. 281-9355.

CLOTHES: Boy's & girl's, all sizes, brand new. 549-5650.

TIRES: Two, 2 wk. old G60x14, mount. on 14x1 chrome reverse deep dish, fits small Chryslers or Fords, must sell, $100; 3.91 posi-gears for Chrysler, $100 or best offer. 271-4649, 9-4 p.m. ask for Chick.

JEEP: Willys '46, 4 cyl., 4 wd, model CJ5, closed cab, needs work, $175. 732-6301.

AUTO PARTS: 4.56 posi rear for Chrys. '62-67, fenderwell headers for wedge eng., '62-64, Edelbrook alum. manifold 361-383, '62-73, heater from Plymouth, pwr. steer units, radiators, misc. pts. 212-347-6516, evgs.

TIRES: Pr. snows, General, used 3 mos., 8.25x14, $40. 922-6225.

SPEAKERS: Custom blt., 3-12 in. for guitar, organ, bass, $210; fender SS bass brain, 150 peak watts, $150.; Traynor bass mate brain, 85 peak w., $75; PA column, cust. blt., 4-10 in. Jensen spkrs., horn, $110. 731-2682.

TRLR. HITCH: VW, $15. MY 4-5091, after 5 p.m.

PUPPIES: German shep., AKC, champ. bred, sire & dam have obedience titles, fully guaran. 732-3552.

HOUSE: Commack, colonial, br. & wood cedar fr., 8 rm., 4 bdrm., lrg. eat-in-kit. sep. din. rm., 2½ bath, 2 car gar., lrg. patio. full bsmt., ¼ plus acre, corner lot fully lndscpd, w-w, s/s, bsbd. heat., wash., dry., dishwash., $46,000. 543-0895.

MISC.: Den furn., $30; coachette carriage, $25; car carriage, $10; stroller, $10; pool, 12 ft. x 36 in. + access., $50. 265-7192.

CHEVROLET: '63 sta. wag., eason. HA 7-6534.

PONTIAC: '69 LeMans, nds. body wk. due to rear-end collision, $350. Robert Schmitt, Ext. 2275.

WHEELS: 1 snow, 1 reg. tire, mtd. on steel rims, F70x14, wide ovals, both $30. FL 2-8925, after 7 p.m.

MISC.: Bicycles, 2 girls', Schwinn 26 in., $30/ ea. H.O. train board, 4x8 ft. on wheels, tunnel, lndscp., 60 ft. track, elec. sw., twin transf. pack, more, $25; sew. mach., fully auto. w/zig-zag, cabinet, $50; sail. pram, 8 ft. Skimmar, fbgls., '71 4 hp Evinrude O/B, $325.; accordion, Art I-So, 120 bass, 2 shift, w/case, $65. 261-0671.

ADD. MACH.: 8 pl. read-out, subtracts & multiplies, repeater button, used 5 times, $50. JU 1-0779.

BOAT: 27 ft. custom blt., head, 2 bunks, Chrysler Marine eng., bilge pump & vent sys. 888-8039.

PONTIAC: '66 GTO, $275. 234-3194.

DESK: Lrg. 38x66, knee hole, wood, office desk & swivel chair, $50. 799-7034.

WHEELS: Two VW Bus '60-67 w/worn 670x15 snows inc., $10. PE 5-3054.

TIRE: Firestone, wide oval, new, G70x15, $10. 938-3708.

OIL TANK: 275 gal. w/stand, $15. SU 1-8655.

CHEVY: '62 Impala, 2-dr. hdtp., 8 cyl., pwr. steer & bks., auto., orig. owner. 286-0039.

SNOWS: 2, 7.75x14 w/rims, used one season, $28; bicycle, 3 yrs. 20 in. boy's, $12. 586-8971.

HALLICRAFTERS: Four-band communications receiver, WR-600 w, $20. 486-0513.

STOVE: Gas, Tappan, 30 in. wh. WE 1-2339.

For Sale

BOAT: '61, 27 ft. Owens, '66 eng. rebuilt this year, fully equip., radio, compass, depth find. & hold. tank, new stainless steel shaft & new prop, sleeps 5, xtras, in water, will demonstrate, $3,500. 249-5084.

HOUSE: Hauppauge, farm ranch, 5 bdrm., 3 bath, liv. rm., din. rm., kit., fam. rm. /firepl., bsmt., 2 car gar., ½ acre, xtras, $47,000. 234-9178, after 5 p.m.

MOBILE HOME: Rollo, 55x12, 2 bdrm., comp. furn., wash., dry, color TV, carp., lndscpd., patio furn., Amityville, Rt. 110, $10,500. 598-1804, after 6 p.m.

PROPERTY: E. Patchogue, sacri., 2.07 acre, nr. Marina, S. Country Rd., must sell, $12,500. GR 5-1522.

TORINO: '68 Squire sta. wag., auto., pwr. steer, radio, pwr. wndw., low mileage, under warr. 751-3531.

PLYMOUTH: '67 Barracuda, beige/blk. int., air cond., AM radio, pwr. steer, 8 cyl., 2-dr., bkt. seats w/ console. blk. vinyl roof, auto. trans., 35,000 mi., $900.; '67 Ford LTD, pwr.-steer., blue w/blk. vinyl roof, blk. int., air. cond., AM radio, auto. trans., 2-dr., 390 c.i., 4 new tires, 36,000 mi., $1,200. 825-0735.

FORD: '62 Falcon sta. wag., wh. 2-dr., 6 cyl., 2 extra tires on wheels, $150. CH 9-3444.

FORD: '64 Fairlane, 4-dr., V8, auto. trans., tires, needs eng./eng. work, make offer. 735-7370.

MISC.: Six ft. toboggan, rope handholds, Adirondack, $18.; twin stroller, canopy & 2 baskets, used 4 times, adjust. backs, straps, $35.; 8 ft. dinghy, fbgls. bottom, 3 hp Johnson Seashore motor, mushrom anchor, 2 oars & 2 oarlocks, $135. 935-1456, after 4 p.m.

SNOWBLOWER: Yardman, 5 hp, used 2 seasons, approx, 20 hrs. run. time, pwrful., $225. 433-3325.

DOG: Old English sheepdog, AKC, female, unspayed, 3 yrs., housebroken, ask. $150. Walter Scally, Ext. 84584.

MISC.: Topcon re Super w/case, lens shade & extra microprism, $200.; 25mm f3.5 lens w/case & 10 filters, lens shade, $100.; f2.8 lens w/case, $80. Bernard Kram, Ext. 9933.

PIANO: Janssen, 574 medium chassis console w/ bench, full keyboard, walnut fin., no use, $500. 935-4354.

VW: '69 Sqback, auto. trans., new bks., 2 new tires, mount. snows, rear defroster, 2 xtra wheels & tires, $1,600. 221-8776, after 5 p.m.

TEMPEST: '65 conv., new top, glass wndw., 8 cyl., 3-spd. std, 326 c.i. 586-0439.

HOUSE: N. Massapequa, 3 bdrm. cape, center hall, eat-in-kit., formal din. rm., 2 car gar., fin. bsmt., wet bar, exta kit. downstairs, laund., w-w, woodburn. firepl, 100x100 plot, fully lndscpd., ask. $42,000. 799-1532.

HONDA: '72, model CB450, stock modified, Glaspak mufflers, $850. Call MO 1-5248 after 3 p.m.

TIRES: Three 695x14 mounted on Ford Mustang rims, 4 mount. holes, $12/ea., 2 for $20, 3 for $25. 884-6017.

TREES: Japanese blk. pine, 1-2 ft., Scotch pinen, 6 ft. 751-1327.

AMATEUR GEAR: Heath, Apache, Mohawk, SB10, recur., xmtr., 6 mtr. conv., bug & dow key, firm. $275. 938-3708.

TV: GE, 26 in. color; 8 ft. kit. cabinets w/sink, dk. walnut stereo cabinet, bar w/stools. 694-2105.

JET PUMP: Deming, 1 hp, comp. w/tank, gages, valve, regulator, working, must disconnect, $150. 744-9886.

OBITUARIES

Plane News has received word that death has come to the Grumman personnel listed below. We extend sincere sympathy to relatives and friends.

FRANKLIN W. GILMORE III died November 3 at the age of 23. He had been with Grumman five months and worked in Flight Avionics, Plant 7. His home was at 246 Sears Rd., West Islip.

EDWARD W. PICCIRILLI of Fuselage Forward Sub & Mapor Assembly, Plant 1, died November 4 at the age of 46. He had been with Grumman since 1964, and he lived at 98 Vincent Rd., Hicksville.

For Sale

LOTS: Two choice, Ocala, Fla. Citrus Springs, planned comunity, pick up payments. 212-738-8073, evg.s

MOTORCYCLE: '72 BSA 650cc, 2,800 mi., 8 in. tubes, 2 bars, sissy bar, 4 in. extend. fork, xtras. 587-8617.

TIRES: Snows, F78x14, w/wheels, Sears, Dynaglass, $50. 271-0898.

SNOWS: VW w/studs, 560x15, used 4 mos., ask. $30. 935-2271, after 6 p.m.

DOORS: Patio, Portalum, 6½x6 ft., comp. w/screen, tracks, lock & key, $75. 433-1526.

BUNGALOW: Nr. Liberty, N. Y., all util., 2 bdrm., scr. porch, pvt. lake. PY 6-3887, after 5:30 p.m.

PUPPIES: German shepherd, AKC reg., heavy bone., bred for temper., watchdogs, pup shots, male & female, 3 mos., deposit will hold till Christmas, $75. 586-3470.

MGBT: '65, wire wheels, snows, tan, stick shift, new muffleri, $1,000. HU 7-8358, evgs.

TIRES: Snows, wide oval, 14 in., used one winter, ask. $30. 549-9697, after 5 p.m.

CARRIAGE: Baby, $25; crib, $30; play pen, $10; baby tender, $10; bassinet, $15; all $75. 732-7949.

CRIB: Contemp. w/canopy, dresser, rock. chair, porta-crib, dress. tbl. 536-7985.

FURN.: Blond wood veneer, dbl. bed w/hdboard., ftboard, spread, man's 4 draw. chest, lay's resser w/mirror, 2 night tbls., $85.; din. rm. set, French Prov., mahog., expandable tble., 6 chrs., $85. VA 5-0829, evgs.

PONTIAC: '70 LeMans, vinyl roof, pwr. steer. & bks., 43,000 mi., $1,600. 538-4339.

FORD: XL Sports coupe, 2-dr. hdtp., gold & blk., vinyl roof, air cond., pwr. steer. & bks., ask. $1,350. MY 4-5884, after 5 p.m.

DODGE: '69 Charger RT, VA 440 eng., 4-spd., posi, pwr. steer., R&H, mag tape alarm, $2,250. 497-2634.

CHEVROLET: '65 Impala sport sed., 327, auto., posi, radio w/rear spkr., $395. 785-1038, after 4:30 p.m.

CORVETTE: '68 conv., 427, tape deck, new eng., new water pump, clutch, ball joints, batt., bk. linings, & tires, $2,600. 293-6549.

TRIUMPH: '71 GT6 MK III, brown w/saddle int., AM/FM, 4-spd., radial ply tires, front disc bks., 16,000 mi., $2,400. PE 5-43866.

CHEVROLET: '65 Caprice, 4-dr. hdtp., air cond., new steel belt. radial snows, auto., '70 V-8, 396 short block, new upper & low. ball joints, universals, fuel & water pump, $650. 271-3562.

CHEVROLET: '62, 4-dr. hdtp., 6 cyl., auto., $250. 271-3562.

CHEVROLET: '63 Belair, 8 cyl., 4-dr. sed., pwr. steer. & bks., radio, $250. 623-3097.

MUSTANG: '66, V-8, R&H, snows, 8 trk. stereo, ask. $650. 587-0330.

CADILLAC: '62, blue, 2 new recaps, ask. $125. 265-1930.

SAAB: '70, 2dr., 30 mpg, 26,000 mi., $1,700. 543 3270.

FORD: '59 pickup, ½ ton, 4-whl. drive, 6 cyl., 3-spd., Warner hubs, hitch, new bks., drums, R&H, xtra tires & whls., $500. 735-2733, after 6 p.m.

TIRES: 2, 735x14 snows on rims for '63 Rambler, used 4 mo., $10/ ea. Jim Esdale, Ext. 7959.

PUPPIES: Boxer, AKC males, champ line, fawn or brindle, $100. 669-2345.

BOAT: '67 Islander, 22 ft., fbgls, inboard/outboard, 150 hp, f.w.c., new batt., manifolds & pwr. tilt, 40 operating hrs., xtras, $3,200. MO 9-5981.

GRINDER: W-W, shredder mulcher, 3 hp Briggs & Stratton eng., $60. 543-9174.

ENCYCLOPEDIA: World Book, '62 ed., w/science & yr. books to '68, $75. AR 1-6113.

PIANO: Ph. Kring, upright, no bench, $100. HA 3-5413.

BANJOS: Kimberly, brand new, sacri., $40 ea. 799-6467.

GOLF CLUBS: Black bag, set of 4 Arnold Palmer woods w/gloves, Wilson Staff irons #2, 3, 4, 5, 7, 8, 9, & pitching wedge, sand wedge Rams best, brass putter, 14 clubs. 669-7282.

MISC.: Golf cart; cafe doors, $10; sofa & ch., $75.; car seat, $10; head board; clock, 8 day, clock, elec.; small pool, 2x10, iron rail, 1x3, two; Suzy Homemaker ice cream, all reason. 549-5650.

BOAT: Penn Yan, 14 ft., glass bottom, 35 hp, Johnson elec. start, just tuned & painted, Holzclaw trlr. & xtras, ready to go, $475. 757-0234.

BOAT: '57 Balco, 23 ft. full fbgls. hull, sleeps 2 adults & 2 child., head, galley, winter cover & xtras, $2,350. 277-4052.

For Sale

MISC.: Boat, 13 ft., plywood/fbgls., $60; girl's bike, $15. 271-7909.

BICYCLE: 16 in. conv., w/train. wheels. banana seat, hi-riser, 1 yr., $15. JU 4-6387.

COAT: Lady's mink-dyed muskrat, coat length, size 12-14, $200. HA 7-2396.

DOG: German shorthair point., AKC, fem., 9 mos., good w/child., needs fenced yd., $75. 588-6364.

SNOWBLOWER: Ariens, 6 hp, 4-spds., fwd., 1 reverse, inc. snow cab & tune-up, $200. 271-3562.

MISC.: Westinghouse hi fi; sewing mach., Macy's port.; antique pole lamp; Kodak Brownie camera, Minolta small spytype camera, make offer. 585-1147.

SEW. MACH.: Visetti, 3 yr., seld. used, attachments, instruct. book, zig-zags, port., button holes, etc., $75. 325-1739.

SKIS: Head std., 180 cm, Cubko bind., size 6 lady's lace boots, $70. 724-2465, after 6 p.m.

JACKET: Size 5, burnt orange, fully lined, tailored pants jacket w/belt, $30. 921-8194.

AIRPLANE: '66 Cessna 150 full panel, 90 channel radio, annual good to May '73, maintained, $3,900. 234-6546.

JACKET: For shoot. small bore, lox, size 46, used 3 times, $18;Freeland shoot; cuff w/sling comb., $10; Woolrich hunt. coat, red/blk. plaid, size 44, $15. 585-2983.

HOUSE: 10 min. Grumman, 3 bdrm., 2½ bath, sundeck, blt. in pool, patio, fnshd. bsmt. Or rent. 271-2473.

HOUSE: Commack, colonial, brick & wood cedar front, 8 rm., 4 bdrm., lrg. eat-in-kit., sep. din. rm., 2½ bath, 2 car gar., patio, ful bsmt., ¼-plus acre, corner, w-w, s/s, bsbd. heat., appli., $46,000. 543-0895.

HOUSE: Colonial, 3 bdrm., 1½ bath, 2½ gar. w/ indep. heat, $35,000. AR 1-1273.

APT.: Condominium, Ft. Myers, Fla., 5 rm., xtras, $25,500. 813-481-0895.

HOUSE: Bellport vil., 3 bdrm., full cellar, firepl., scrn. porch, attach. gar., prins. only, $35,500 firm. 286-8062.

HOUSE: Franklin Sq. cape, 7 rm., 2 bath, breezeway & attach. gar., 80x100, ask. $49,500. 328-0672, after 5 p.m.

HOUSE: Commack, 4 bdrm. ranch, 1/3 acre, eat-in-kit. w/dishwash., liv. rm., din. rm., lrg. fam. rm., attach 2 car gar, bsmt, central air cond., s/s, 16x30 patio, ask. $39,990. 543-9021.

HOUSE: Cape Cod, 3 bdrm. sep. din. rm., encl. porch, sep. gar., Westbury, firepl., patio, fenced in yd., $32,500. 334-8262.

HOUSE: N. Merrick, 4 bdrm., 2 bath, attach. gar, chain link fence, new stove, refrig., immed. occup. 587-1652.

LAND: Whitehaven in Pocono Mts., ½ acre, pvt. lake community, $2,700. 587-5068, after 5 p.m.

HOUSE: Plainview, Wash. Ave. vic., 3 bdrm., (poss. 4th), cntrl. hall, hilltop ranch, w/slate flr. entry, beam. liv. rm. & din. rm, firepl., lrg. eat-in-kit., mud-laund. rm., den, 2 full bath, 2½ car gar., patio, 100x100 fenc., xtras, ask. $56,500. 692-2738, after 5 p.m.

RANCH: Holbrook custom, brick front, 2 car gar., circ. drive, 3 bdrm,, 2 bath, fomal din. rm., eat-in-kit., 20x22 pan. den, city & well, patio, fenc., full bsmt. 8½ ft. w/outside entr., 3 zone heat, 1 mo. old, reduced, prins. only, $45,000. 585-8213.

BUNGALOW: Ferndale, N.Y., furn., ful kit. & bath, can be winterized, all util. PY 6-3887.

PROPERTY: Fla., west coast, N. Port Charlotte, bet. Ft. Myers & Sarasota, 160x125, $6,000. 676-0967, after 5:30 p.m.

HOUSE: Northport Vil., brand new, colonial, 4 bdrm., 2½ bath, 2 car gar., liv. rm., din. rm., laund., lrg. fam. rm., 3 zone o.h.w heat, cedar shakes on quiet cul-de-sac, must sell, $44,000 212-225-3487.

HOUSE: Levittown, 4 bdrm., extend. kit., lrg. liv. & din. rm., w-w, screen. porch, appli. 796-1017.

CHEVROLET: '64 conv., Super Sport 283, pwr. steer & bks., auto., $250. 432-4767.

FURN.: From 8 rms., come browse around, E. Northport area. 368-2982.

AIRCRAFT SHARE: '63 Cessna Skylane, 1/5, must sell, being transferred, $2,200. dues pd. for 1 yr. modern gyros, dual VOR, transponder etc. 751-1091, ask for TK.

STOVE: Elec., Westinghouse Golden Jubilee, 30 in. range, fully auto. controls on back panel. 271-7076.

PUMP: 1 hp shallow well, 110/120v, 6 mos.; 30 gal. glass-lined water tank, firm, $125. 888-8787.

MINI BIKE: Rupp Roadster, fr. & rear shocks, lights, bks, 4 hp eng., 12 in. wheels, used 10 hrs., $200. 938-2594.

For Sale

WASH. MACH.: 3 cycle, normal, delicate, perm. press, used 2 yrs., sacri. $60. 292-8524.

PIANO: Console, delivered & tuned in your home, $300. 888-7949.

SNOWS: 2 Goodyear stud., 695x14 w/w, mount. on new wheels w/new valve stems, approx. 1,000 mi., $55. 364-1912.

RANGE: GE elec., stainless steel top, $35. JU 4-6214.

BDRM. FURN.: Dresser, 48x28 chest, 36x48 hdboard, 2 night tbls., $50., make offer. 431-1587.

SNOWS: Two G 70 glass belt., stud, & mount. on rims, fit Pontiac, $45. AN 5-0658, evgs.

SWEEPER: Lawn, 25 in. Sears, ask. $10. 586-8130.

TRLR.: Util., '70 metal Sears, hinged, removable dome metal top, fenders, lights, spare tire, $175. 587-6621.

MOWER: Riding, Cyclone spread.; lawn sweeper; Melnor walk. sprinkler; all for $150. 694-3540.

CORVETTE: '71 LTI, AM/FM stereo, 850 dual feed Holley, Mallory ign., Hooker headers w/side pipes, mags, G 60x15 tires, 17,000 mi., ask. $4,495. 289-6808, days.

MUSTANG: '65 conv., 4 sp., new: top, ball joints, shocks, & bks., $550. 661-1855.

FORD: '65 custom, newly paint., 4-dr., automatic, V8, $500. 884-7153.

CHEVY: '64 Impala wagon, auto. pwr. steer, $195. JU 4-6387.

PONTIAC: '68 LeMans, 2-dr. hdtp., auto. trans., ask. $950. 586-3285.

TRLR.: '71 Apache, fully equip; stove, sink, icebox, dinette, awning, spare tire, elec. bks., $1,300. FO 8-1148.

HONDA: '72 K4 350 CB, maroon, sissy bar, 2 helmets, low mileage, $800. 781-4511.

SNOWS: Two, A78x13, 4 ply nylon, on Chevy Vega wheels, less than 1,000 mi., $40. 735-7030.

SNOWS: Two, 6.50x13, Sears, 4 ply nylon tubeless, on 4 lug wheels, $25; one 6.50x13 Sieberling Supreme 150 tire, poly. cord, tubeless, on 4 lug wheel, $10. 732-5598.

SNOWS: And wheels for VW, 2-560x15 w/5 hole wheel, tires used 1 season, wheels fit VW to '68, $30 for 2 tires & wheels. AN 1-3570.

BUS: VW '71, 7 pass., 24,000 mi., $2,400. 243-0341.

HOUSE: Plainview, split, 3 bdrm., liv. rm., din. rm., eat-in-kit., rec. rm., fin. bsmt., gar., 1½ bath, w-w, blinds, appli., ¼ acre, corner, fully lndscpd., mid $40's. WE 5-9554.

CADILLAC: '68 Calais, air cond., pwr. steer & bks., auto. trans, vinyl int., 4-dr., hdtop., rear speaker. CA 1-5857.

CHEVY: '64 wag., 4-dr., new trans., bks. & rear, $200. PY 8-3446.

FORD: Sta. wag., '70, pwr. steer & bks. air cond., 7 new tires, incl. snows, $1,600. PE 5-5523.

TOYOTA: '71 Corolla, radio, 20,000 mi., ask. $1,390. 724-4398.

VW: '65 w/sun deck; '59 VW broken eng & spare pts., best offer all over $350. 732-4693.

TIRES: Two, w/w, used 6 mos., 775x14, both $25. 212-353-4593.

MINK STOLE: Tourmaline beige, $195. JU 1-8115.

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Wind up Hawkeye NPE trials

With the second phase of NPE (Navy Preliminary Evaluation) trials on the E-2C Hawkeye scheduled to wind up today at Bethpage, about 40 Navy team members conducting the tests will soon be heading back to their home units: Naval Air Test Center, Operational Test and Evaluation Force, Naval Missile Center, Fleet Combat Direction Systems and Support Activities, and Naval Representative's Office, Bethpage.

Lt. Cdr. Jim Fannon headed the Navy NPE team comprised of pilots, engineers, Naval Flight Officers, and radar operators and technicians. The Navy team flew two of the Hawkeyes in more than 20 day and night missions to accomplish test objectives.

The trials, which began two weeks ago, were scheduled to flight test Hawkeye systems, with primary emphasis on radar detection and tracking, data link, passive detection system, and tracking and intercept control.

In its first NPE earlier this year, the Hawkeye was evaluated "excellent" for its airborne-early warning of attack and intercept control role.

(Photos by Bob Settles)